

AMENDMENT TO THE CLAIMS

1. (Previously Presented) A method of identifying a clean speech signal from a noisy speech signal, the method comprising:

- receiving a plurality of observation vectors each representing a separate frame of a noisy speech signal;
- a processor using a prior model of clean speech and the plurality of observation vectors to determine a mean and covariance for a distribution of noise values;
- a processor using the mean and covariance for the distribution of noise values, a respective observation vector, and the prior model of clean speech to compute an estimate for a clean speech value for each frame;
- a processor using the mean and covariance for the distribution of noise values and a respective observation vector to compute an estimate for a noise value for each frame, where each estimate for the noise value is separate from the mean of noise values;
- a processor converting the clean speech value and the noise value for each frame into the spectral domain to form clean speech spectral values and noise spectral values;
- a processor smoothing the clean speech spectral values over time and frequency to form smoothed clean speech spectral values, wherein smoothing over time involves smoothing clean speech spectral values for a frequency across different frames;
- a processor smoothing the noise spectral values over time and frequency to form smoothed noise spectral values;
- a processor using the smoothed clean speech spectral values and the smoothed noise spectral values to set a gain for a filter for a frame wherein setting a gain for a filter for a frame comprises defining the gain as a ratio with denominator of the ratio being the sum of the smoothed clean speech

spectral value for the frame and the smoothed noise spectral value for the frame and a numerator of the ratio that is a function of the smoothed clean speech spectral value for the frame and the smoothed noise spectral value for the frame; and

applying the observation vector to the filter to produce a filtered clean speech vector representing a segment of a clean speech signal.

2-5. (Canceled)

6. (Previously Presented) The method of claim 1 wherein determining a mean of the distribution of noise values comprises at each of a set of iterations, updating the mean by adding a value to the value of the mean in a past iteration, the value added to the mean not being computed based on a product formed between a covariance of the noise distribution and a difference between the observation vector and another value.

7-8. (Canceled)

9. (Previously Presented) The method of claim 1 wherein defining the gain as a ratio comprises defining the ratio such that it is guaranteed to be positive if the clean speech value and the noise value are positive.

10. (Previously Presented) The method of claim 1 wherein the observation vector has been formed without applying a frequency-based transform.

11-24. (Canceled)